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10/577,663

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Hui Li

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EXAMINER

HERRERA, DIEGO D

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/577,663 | Applicant(s) LI ET AL. | |
| | Examiner DIEGO HERRERA | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 5/1/2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because EP 1398910 A1 has no translation to English. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Priority

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

Response to Amendment

Claims 1-11 have been cancelled; new claims 12-28 have been submitted.

Amendments to original specification have been noted by the Office.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12- 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Gandolfo (US 20030224787 A1).

Regarding claim 12. Gandolfo discloses a method for determining a route for a radio transmission between a first radio station and a second radio station in a radio communications system (abstract, title, fig. 3, 6a-c, 8; ¶: 36-39, Gandolfo teaches route and control of radio transmission between devices within a communications system) having the first radio station (fig. 5, element 521a), the second radio station (fig. 5, element 522a), a plurality of potential carrier radio stations (fig. 5, elements 523a-524a) and a radio device (fig. 5, element 510a) (abstract, title, fig. 3, 6a-c, 8; ¶: 40, 41, 64-65, Gandolfo teaches first, second, plurality of devices, and a radio device in a network system), comprising:

sending a request to determine a route between the first and second radio stations (¶: 5, 38, 41, 50; Gandolfo teaches using physical layers in order to route information between initiating device and recipient); using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission (¶: 28-30, 37-38, 41; Gandolfo teaches proximity wireless systems that show relationship between the mobile devices and base stations or nodes), the at least

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one carrier radio station being identified in response to the request to determine a route (¶: 46, 49, 74-75, 78-79, Gandolfo teaches extracting information to relay information from one device to another);

sending identification information from the radio device to the first radio station and/or the second radio station to identify the at least one carrier radio station (¶:74-79, Gandolfo teaches information from one service node to adjacent node overlapping providing information about services and status of network); and

after the identification information has been sent, identifying at least one additional carrier radio station at the radio stations of the radio communications system(¶:74-79, Gandolfo teaches information from one service node to adjacent node overlapping providing information about services and status of network); and

routing the radio transmission between the first radio station and the second radio station using the carrier radio stations identified by the radio device and the radio stations(¶:74-79, Gandolfo teaches information from one service node to adjacent node overlapping providing information about services and status of network).

Regarding claim 28. Gandolfo discloses a radio device for a radio communication system having a first radio station (fig. 5, element 521a), a second radio station (fig. 5, element 522a), and a plurality of potential carrier radio stations(fig. 5, elements 523a-524a) (abstract, title, fig. 3, 6a-c, 8; ¶: 36-39, 82-99, Gandolfo teaches route and control of radio transmission between devices within a communications system), comprising: a memory to store adjacent positioning relationships between the radio stations of the

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radio communications system (¶: 102, Gandolfo teaches memory of adjacent wireless network device);

a unit to use the adjacent positioning relationships to identify at least one carrier radio station to route a radio transmission on a path between the first radio station and the second radio station (abstract, title, fig. 6a-c, ¶: 68-69, 74-79, 82-99, Gandolfo teaches radio stations and mobile devices and several configurations and arrangements), the at least one carrier radio station being identified in response to a request for routing (abstract, ¶: 39-41, 63, 68-69, 74-75, Gandolfo teaches information gather from mobile device as to protocols described in Gandolfo, otherwise, no service is provided); and a transmitter to send identification information identifying the at least one carrier radio station (fig. 5, ¶: 9-10, 74, Gandolfo teaches mobile devices have capability to transmit information and receive information from network), the identification information being transmitted to the first radio station and/or the second radio station so that after the identification information is sent, the radio stations will determine at least one additional carrier radio station to complete the path between the first radio station and the second radio station (abstract, title, fig. 3, 6a-c, 8; ¶: 36-39, 82-99, Gandolfo teaches route and control of radio transmission between devices within a communications system in several configurations).

Consider claim 13. The method in accordance with claim 12, Gandolfo discloses wherein the radio device, to identify at least one carrier radio station, selects the at least one carrier radio station from a plurality of radio stations for which the radio device has adjacent positioning relationships (fig. 6a-c, abstract, title, ¶: 9-10, 12, 36-41, 46-50, 63,

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68-69, 74-79, 82-99, Gandolfo teaches radio stations within their range of communication determined master controller and assume the role of slave as the protocols stated in reference of Gandolfo).

Consider claim 14. The method in accordance with claim 12, Gandolfo discloses wherein the radio device sends the first radio station identification information to identify a third radio station as the at least one carrier radio station (fig. 3, ¶: 65, Gandolfo teaches mobile devices may be connected with other devices, hence, first radio station may be interacting with a third radio station receiving identification information of the first radio station), and

the radio device does not send the second radio station any identification information (fig. 3, ¶: 65, 66 Gandolfo teaches mobile devices may be connected with other devices, hence, first radio station may be interacting with a third radio station receiving identification information of the first radio station, as stated in Gandolfo it is not necessary that the first radio station has to communicate with another device, say the second radio station).

Consider claim 15. The method in accordance with claim 14, Gandolfo discloses wherein the first radio station, after receiving the identification information relating to the third radio station, initializes the determination of a route between the first radio station and the third radio station (fig. 8, element 840), and the third radio station between the third radio station and the second radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of

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information).

Consider claim 16. The method in accordance with claim 12, Gandolfo discloses wherein the radio device identifies a plurality of carrier radio stations (fig. 5, 6a-c, 8, Gandolfo teaches radio identifying a plurality of carrier radio stations as information is broadcasted throughout the network),

the first radio station after receiving identification information relating to the plurality of carrier radio stations (fig. 5, 6a-c, 8, ¶: 82-99, 108, 110, Gandolfo teaches radio identifying a plurality of carrier radio stations as information is broadcasted throughout the network), initializes the determination of a route between the first radio station and one of the plurality of carrier radio stations, and

at least one of the carrier radio stations identified by the radio device initializes the determination of a route (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information):

between the relevant carrier radio station and another carrier radio station identified by the radio device (fig. 5, 8; ¶: 70-80, 108, 110, 112 Gandolfo teaches routing planning between device and multiple devices including hops and multi-hops), or

between the relevant carrier radio station and the second radio station (fig. 5, 8; ¶: 70-80, 108, 110, 112 Gandolfo teaches routing planning between device and multiple devices including hops and multi-hops).

Consider claim 17. The method in accordance with Claim 12, Gandolfo discloses wherein the radio device identifies at least a third radio station and a fourth radio station

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as carrier radio stations (fig. 6a-c, 8, ¶: 82-99, 108, 110, Gandolfo teaches method of identifying hops or radio carrier stations of information to the targeted device planning routing path),

the radio device sends the first radio station identification information to identify the third radio station (fig. 6a, ¶: 36-38, 82-85, Gandolfo teaches 510a can communicate information relating to 521a to either 522a or 510b depending on routing plan), and the radio device sends the second radio station identification information to identify the fourth radio station (fig. 6a, ¶: 36-38, 82-85, Gandolfo teaches 510a can communicate information relating to 522a to either 521a or 510b depending on routing plan).

Consider claim 18. The method in accordance with claim 17, Gandolfo discloses wherein the first radio station, after receiving the identification information identifying the third radio station, initializes the determination of a route between the first radio station and the third radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information), and

the second radio station, after receiving the identification information identifying the fourth radio station, initializes the determination of a route between the second radio station and the fourth radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information).

Consider claim 19. The method in accordance with 17, Gandolfo discloses wherein the third radio station initializes the determination of a route between the third radio

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station and the fourth radio station and/or

the fourth radio station initializes the determination of a route between the fourth radio station and the third radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information).

Consider claim 20. The method in accordance with claim 17, Gandolfo discloses wherein the radio device additionally sends the first radio station identification information identifying the fourth radio station and/or additionally sends the second radio station identification information identifying the third radio station and the first radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information).

Consider claim 21. The method in accordance with claim 13, Gandolfo discloses wherein the radio device sends the first radio station identification information to identify a third radio station as the at least one carrier radio station (fig. 3, ¶: 65, Gandolfo teaches mobile devices may be connected with other devices, hence, first radio station may be interacting with a third radio station receiving identification information of the first radio station), and

the radio device does not send the second radio station any identification information (fig. 3, ¶: 65, 66 Gandolfo teaches mobile devices may be connected with other devices, hence, first radio station may be interacting with a third radio station receiving identification information of the first radio station, as stated in Gandolfo it is not

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necessary that the first radio station has to communicate with another device, say the second radio station).

Consider claim 22. The method in accordance with claim 21, Gandolfo discloses wherein the first radio station, after receiving the identification information relating to the third radio station, initializes the determination of a route between the first radio station and the third radio station (fig. 8, element 840), and the third radio station initializes the determination of a route between the third radio station and the second radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information).

Consider claim 23. The method in accordance with claim 13, Gandolfo discloses wherein the radio device identifies a plurality of carrier radio stations (fig. 5, 6a-c, 8, Gandolfo teaches radio identifying a plurality of carrier radio stations as information is broadcasted throughout the network), the first radio station after receiving identification information relating to the plurality of carrier radio stations (fig. 5, 6a-c, 8, ¶: 82-99, 108, 110, Gandolfo teaches radio identifying a plurality of carrier radio stations as information is broadcasted throughout the network), initializes the determination of a route between the first radio station and one of the plurality of carrier radio stations, and at least one of the carrier radio stations identified by the radio device initializes the determination of a route (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay

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pattern determining route of information):

between the relevant carrier radio station and another carrier radio station identified by the radio device (fig. 5, 8; ¶: 70-80, 108, 110, 112 Gandolfo teaches routing planning between device and multiple devices including hops and multi-hops), or

between the relevant carrier radio station and the second radio station (fig. 5, 8; ¶: 70-80, 108, 110, 112 Gandolfo teaches routing planning between device and multiple devices including hops and multi-hops).

Consider claim 24. The method in accordance with Claim 13, Gandolfo discloses wherein the radio device identifies at least a third radio station and a fourth radio station as carrier radio stations (fig. 6a-c, 8, ¶: 82-99, 108, 110, Gandolfo teaches method of identifying hops or radio carrier stations of information to the targeted device planning routing path),

the radio device sends the first radio station identification information to identify the third radio station (fig. 6a, ¶: 36-38, 82-85, Gandolfo teaches 510a can communicate information relating to 521a to either 522a or 510b depending on routing plan), and the radio device sends the second radio station identification information to identify the fourth radio station (fig. 6a, ¶: 36-38, 82-85, Gandolfo teaches 510a can communicate information relating to 522a to either 521a or 510b depending on routing plan).

Consider claim 25. The method in accordance with claim 24, Gandolfo discloses wherein the first radio station, after receiving the identification information identifying the third radio station, initializes the determination of a route between the first radio station and the third radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning

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between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information), and

the second radio station, after receiving the identification information identifying the fourth radio station, initializes the determination of a route between the second radio station and the fourth radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information).

Consider claim 26. The method in accordance with 25, Gandolfo discloses wherein the third radio station initializes the determination of a route between the third radio station and the fourth radio station and/or the fourth radio station initializes the determination of a route between the fourth radio station and the third radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information).

Consider claim 27. The method in accordance with claim 26, Gandolfo discloses wherein the radio device additionally sends the first radio station identification information identifying the fourth radio station and/or additionally sends the second radio station identification information identifying the third radio station and the first radio station (fig. 8, ¶: 108, 110, 112, Gandolfo teaches relay planning between devices and network nodes, hence, determining hops and next hop and relay pattern determining route of information).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEGO HERRERA whose telephone number is (571)272-0907. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Herrera/
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617